

in the tank. When the test pressure exceeds the start-to-discharge or burst pressure of a pressure relief device, the device must be rendered inoperative. The written procedures and test method for leak testing must ensure the sensitivity and reliability of the test method to prevent premature failure. This section does not apply to facilities that remove closures for the sole purpose of loading or unloading the lading (e.g., blind flanges, pipe plugs, etc.).

(k) *Service equipment inspection and test.* (1) Each tank car owner must ensure the qualification of tank car service equipment at least once every ten (10) years. The tank car owner must analyze the service equipment inspection and test results for any given lading and, based on the analysis, adjust the inspection and test frequency to ensure that the design level of reliability and safety of the equipment is met. The owner must maintain at its principal place of business all supporting documentation used to make such analyses and inspection and test frequency adjustments. The supporting documentation must be made available to FRA or an authorized representative of the Department upon request.

(2) Each tank car facility must qualify service equipment, including reclosing pressure relief devices and interior heater systems in accordance with the applicable provisions of Appendix D of the AAR Specifications for Tank Cars (IBR, see §171.7 of this subchapter).

(l) *Alternative inspection and test procedures.* When approved by the Associate Administrator for Railroad Safety, FRA, a tank car owner, or a coating or lining owner may use an alternative inspection and test procedure or interval based on a damage-tolerance analysis (that must include a determination of the probable locations and modes of damage due to fatigue, corrosion, and accidental damage), or based on a service reliability assessment (that must be supported by analysis of systematically collected data) in lieu of the other requirements of this section.

(m) *Inspection and test compliance date for tank cars.* (1) After July 1, 2000, each tank car with a metal jacket or with a thermal protection system shall have

an inspection and test conforming to this section no later than the date the tank car requires a periodic hydrostatic pressure test (i.e., the marked due date on the tank car for the hydrostatic test).

(2) After July 1, 1998, each tank car without a metal jacket shall have an inspection and test conforming to this section no later than the date the tank car requires a periodic hydrostatic pressure test (i.e., the marked due date on the tank car for the hydrostatic test).

(3) For tank cars on a 20-year periodic hydrostatic pressure test interval (i.e., Class DOT 103W, 104W, 111A60W1, 111A100W1, and 111A100W3 tank cars), the next inspection and test date is the midpoint between the compliance date in paragraph (1)(1) or (2) of this section and the remaining years until the tank would have had a hydrostatic pressure test.

[Amdt. 180-8, 60 FR 49079, Sept. 21, 1995, as amended by Amdt. 179-50, 61 FR 33256, June 26, 1996; 62 FR 51561, Oct. 1, 1997; 63 FR 52851, Oct. 1, 1998; 66 FR 45391, Aug. 28, 2001; 68 FR 75765, Dec. 31, 2003; 71 FR 54398, Sept. 14, 2006; 77 FR 37987, June 25, 2012]

#### § 180.511 Acceptable results of inspections and tests.

Provided it conforms to other applicable requirements of this subchapter, a tank car is qualified for use if it successfully passes the inspections and tests set forth below conducted in accordance with this subpart. A representation of that qualification must consist of marking the tank in accordance with §180.515.

(a) *Visual inspection.* A tank car successfully passes the visual inspection when the inspection shows no structural defect that may cause leakage from or failure of the tank before the next inspection and test interval.

(b) *Structural integrity inspection and test.* A tank car successfully passes the structural integrity inspection and test when it shows no structural defect that may initiate cracks or propagate cracks and cause failure of the tank before the next inspection and test interval.

(c) *Service life shell thickness.* A tank car successfully passes the service life shell thickness inspection when the

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tank shell and heads show no thickness reduction below that allowed in § 180.509(g).

(d) *Safety system inspection.* A tank car successfully passes the safety system inspection when each thermal protection system, tank head puncture resistance system, coupler vertical restraint system, and system used to protect discontinuities (e.g., breakage grooves on bottom outlets and protective housings) on the tank car conform to this subchapter and show no indication of a defect that may reduce reliability before the next inspection and test interval.

(e) *Lining and coating inspection.* A tank car successfully passes the lining and coating inspection and test when the lining or coating conforms to the owner's acceptance criteria.

(f) *Leakage pressure test.* A tank car successfully passes the leakage pressure test when all product piping, fittings and closures show no indication of leakage.

(g) *Hydrostatic test.* A Class 107 tank car, the inner tank of a Class 115 tank car, or a riveted tank car successfully passes the hydrostatic test when it shows no leakage, distortion, excessive permanent expansion, or other evidence of weakness that might render the tank car unsafe for transportation service.

(h) *Service equipment.* A tank car successfully passes the service equipment inspection and test when this equipment conforms to this subchapter and applicable provisions of Appendix D of the AAR Specifications for Tank Cars (IBR, see § 171.7 of this subchapter), and shows no indication of a defect that may reduce reliability during the qualification interval.

[Amdt. 180-8, 60 FR 49079, Sept. 21, 1995, as amended by Amdt. 179-50, 61 FR 33256, June 26, 1996; 66 FR 45187, Aug. 28, 2001; 77 FR 37990, June 25, 2012]

### § 180.513 Repairs, alterations, conversions, and modifications.

(a) To work on tank cars, a tank car facility must comply with the applicable requirements of this subpart, the AAR Specifications for Tank Cars (IBR, see § 171.7 of this subchapter), and the owner's requirements.

(b) *Responsibilities of Tank Car Facility.* A tank car facility must obtain the permission of the equipment owner before performing work affecting alteration, conversion, repair, or qualification of the owner's equipment. For the purposes of qualification and maintenance, the tank car facility must use the written instructions furnished by the owner or have written confirmation from the owner allowing the use of written instructions furnished by the owner or have written confirmation from the owner allowing the use of written instructions furnished by another. A tank car facility must not use, copy distribute, forward or provide to another person the owner's confidential and proprietary written instructions, procedures, manuals, and records without the owner's permission. A tank car facility must report all work performed to the owner. The tank car facility must also report observed damage, deterioration, failed components, or non-compliant parts to the owner. A tank car facility must incorporate the owner's Quality Assurance Program into their own Quality Assurance Program.

(c) Unless the exterior tank car shell or interior tank car jacket has a protective coating, after a repair that requires the complete removal of the tank car jacket, the exterior tank car shell and the interior tank car jacket must have a protective coating applied to prevent the deterioration of the tank shell and tank jacket. Previously applied coatings that still provide effective protection need not be covered over.

(d) After repair, replacement, or qualification of tank car service equipment, the tank service equipment must successfully pass the leak test prescribed in § 180.509(j).

[77 FR 37990, June 25, 2012]

### § 180.515 Markings.

(a) When a tank car passes the required inspection and test with acceptable results, the tank car facility must mark the date of the inspection and test and due date of the next inspection and test qualified on the tank car in accordance with the applicable provisions of Appendix C of the AAR Specifications for Tank Cars (IBR, see § 171.7